

## Appendix D.

### National Technical Guidance Series, Bulletin Boards, and Electronic Data Bases

#### D-1. Introduction

As discussed in this EM, the efficiency with which an FFMS can be developed and implemented at an HTRW site is highly dependent on the extent and quality of technical information available during the development phase of the program. To organize this information and make it readily accessible, EPA and other federal agencies have developed an extensive network of technical guidance series, fact sheets, databases, electronic bulletin board systems, and contacts that are specifically geared toward an FFMS at an HTRW site.

#### D-2. National Technical Guidance Study Series

The National Technical Guidance Study Series (NTGSS) documents, developed for EPA's Office of Air Quality Planning and Standards (OAQPS) in cooperation with the Office of Emergency and Remedial Response (OERR), provide information on air pathway assessments at hazardous waste sites. These documents offer technical guidance to a diverse audience, including EPA Air and Superfund Regional and Headquarters staff, State air and Superfund program staff, Federal and State remedial and removal contractors, USACE, and potentially responsible parties. There are 37 Superfund site documents in the National Technical Guidance Study Series, as identified in Table D-1. A listing of these documents is also contained on EPA's AMTIC Bulletin Board System (BBS). Documents can be obtained through the National Technical Information Service (NTIS) at (703) 487-4650. Other sources of documents include EPA's Center for Environmental Research Information (CERI), (513) 569-7562, and the U.S. Government Printing Office, (202) 783-3238.

**Table D-1**  
**National Technical Guidance Study Series**

Title	EPA No.	Date
Air/Superfund NTGS Series: Volume I - Application of Air Pathway Analyses for Superfund Activities	EPA-450/1-89-001 (NTIS PB90-113374/AS)	July 1989
Air/Superfund NTGS Series: Volume I - Overview of Air Pathway Assessments for Superfund Sites	EPA450/1-89-001a (replaces EPA450/1-89-001)	November 1992
Air/Superfund NTGS Series: Volume II- Estimation of Baseline Air Emissions at Superfund Sites	EPA-450/1-89-002a (NTIS PB90-270588)	August 1990
Air/Superfund NTGS Series: Volume III- Estimation of Air Emissions from Clean- up Activities at Superfund Sites	EPA450/1-89-003 (NTIS PB89-180061/AS)	January 1989
Air/Superfund NTGS Series: Volume IV - Procedures for Dispersion Modeling and Air Monitoring for Superfund Air Pathway Analysis	EPA-450/1-89-004 (NTIS PB90-113382/AS)	July 1989
Air/Superfund NTGS Series: Volume IV - Guidance for Ambient Air Monitoring at Superfund Sites (Revised)	EPA451/R-93-007 (replaces EPA450/1-89-004)	May 1993

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A Workbook of Screening Techniques for Assessing Impacts of Toxic Air Pollutants

EPA450/4-88-009 (NTIS PB89-134340)

September 1988

**Table D-1. (Continued)**

<b>Title</b>	<b>EPA No.</b>	<b>Date</b>
Data Quality Objectives for Ambient Air Monitoring Around Superfund Sites (Stages I and II)	EPA450/4-89-015 (NTIS PB90-204603/AS)	August 1989
Soil Vapor Extraction VOC Control Technology Assessment	EPA-450/4-89-017 (NTIS PB90-216995)	September 1989
Area Source Dispersion Algorithms for Emission Sources at Superfund Sites	EPA450/4-89-020 (NTIS PB90-142753)	November 1989
Air Pathway Analysis Review Checklists	EPA450/1-90-001 (NTIS PB90-182544/AS)	January 1990
Comparisons of Air Stripper Simulations and Field Performance Data	EPA-450/1-90-002 (NTIS PB90-207317)	March 1990
Air Stripper Design Manual	EPA450/1-90-003 (NTIS PB91-125997)	May 1990
Contingency Plans at Superfund Sites Using Air Monitoring	EPA450/1-90-005 (NTIS PB91-102129)	September 1990
Data Quality Objectives for Ambient Air Monitoring Around Superfund Sites (Stage III)	EPA450/4-90-005 (NTIS PB90-204611/AS)	March 1990
User's Guide to TSCREEN - A Model for Screening Toxic Air Pollutant Concentrations	EPA450/4-90-013 (NTIS PB91-141820)	December 1990
Development of Example Procedures for Evaluating the Air Impacts of Soil Excavation Associated with Superfund Remedial Actions	EPA450/4-90-014 (NTIS PB90-255662/AS)	July 1990
Emission Factors for Superfund Remediation Technologies	EPA450/1-91-001 (NTIS PB91-190-975)	March 1991
Estimation of Air Impacts for Air Stripping of Contaminated Water	EPA450/1-91-002 (NTIS PB91-211888)	May 1991
Database of Emission Rate Measurement Projects (Technical Note)	EPA450/1-91-003 (NTIS PB91-222059LDL)	June 1991
Estimation of Air Impacts for Soil Vapor Extraction (SVE) Systems	EPA450/1-92-001 (NTIS PB92-143676/AS)	January 1992
Guideline for Predictive Baseline Emissions Estimation Procedures for Superfund Sites (Interim Final)	EPA450/1-92-002 (NTIS PB92-171909)	January 1992
Screening Procedures for Estimating the Air Impacts of Incineration at Superfund Sites	EPA450/1-92-003 (NTIS PB92-171917)	February 1992
Estimation of Air Impacts for the Excavation of Contaminated Soil	EPA450/1-92-004 (NTIS PB92-171925)	March 1992
User's Guide for the Fugitive Dust Model	EPA-910/9-88-202R (NTIS PB90-215203, PB90-502410)	January 1991
Applicability of Open Path Monitors for Superfund Site Cleanup	EPA451/R-92-001 (NTIS requested but not)	May 1992
Assessing Potential Indoor Air Impacts for Superfund Sites	EPA451/R-92-002 (NTIS PB93-12257)	September 1992

Models for Estimating Air Emission Rates from Superfund Remedial Actions	EPA451/R-93-001 (NTIS PB93-186807)	March 1993
Air Emissions from Area Sources: Estimating Soil and Soil-Gas Sample Number Requirements	EPA 151/R-93-002 (NTIS PB93-173995)	March 1993

**Table D-1. (Continued)**

<b>Title</b>	<b>EPA No.</b>	<b>Date</b>
Estimation of Air Impacts for Bioventing Systems Used at Superfund Sites	EPA451/R-93-003 (NTIS PB93-215655)	April 1993
Estimation of Air Impacts From Area Sources of Particulate Matter Emissions at Superfund Sites	EPA451/R-93-004 (NTIS PB93-215648)	April 1993
Estimation of Air Impacts for Thermal Desorption Units Used at Superfund Sites	EPA451/R-93-005 (NTIS PB93-215630)	April 1993
Estimation of Air Impacts for Solidification and Stabilization Processes Used at Superfund Sites	EPA451/R-93-006 (NTIS PB93-215622)	April 1993
Compilation of Information on Real-Time Air Monitoring for Use at Superfund Sites	EPA451/R-93-008 (NTIS PB93-199222)	May 1993
Evaluation of Short-Term Air Action Levels for Superfund Sites	EPA451/R-93-009 (NTIS PB93-200913)	May 1993
Options for Developing and Evaluating Mitigation Strategies for Indoor Air Impacts at CERCLA Sites	EPA451/R-93-012 (NTIS PB94-110517)	Sept 1993
Contingency Analysis Modeling for Superfund Sites and Other Sources	EPA454/R-93-001 (NTIS PB93-169126)	Jan 1993

### D-3. ARARs Fact Sheets

Section 121(d) of CERCLA, as amended by SARA, requires that on-site remedial actions must attain State-applicable or relevant and appropriate requirements (ARARs). These requirements apply to environmental protection and facility siting, upon completion of the remedial action. The ARARs Fact Sheets, produced by EPA's Office of Solid Waste and Emergency Response, address questions that arose in developing ARARs policies, in ARARs training sessions, and in identifying and complying with ARARs at specific sites.

The *Compendium of CERCLA ARARs Fact Sheets and Directives* (EPA Publication 9347.3-15) provides a complete and current source of "Quick Reference Fact Sheets" and Directives of ARARs. The fact sheets provide overviews of the ARARs for CERCLA cleanup actions. The *Compendium of CERCLA ARARs Fact Sheets and Directives* consists of seven chapters: Chapter 1 lists general fact sheets that provide introductory information on ARARs; Chapter 2 discusses air emissions for Superfund air strippers; Chapter 3 deals with Indian Tribal involvement in the Superfund program; Chapter 4 discusses soil lead cleanup levels at Superfund sites; Chapter 5 discusses the risk associated with Superfund cleanups; Chapter 6 contains four sections that discuss a variety of RCRA ARARs such as general guidance topics, land disposal restrictions (LDR), Superfund LDR guides, and toxicity characteristics; and Chapter 7 contains a variety of ARAR fact sheets and directives on Wastewater, Safe Drinking Water Act, and Groundwater.

The *Compendium of CERCLA ARARs Fact Sheets and Directives* can be ordered from NTIS at (703) 487-4650, NTIS Order #DE92004878/REB.

#### D-4. Databases

Several of the more useful databases applicable to FFMS at HTRW sites are identified and described below. Many of these sources can be directly accessed at minimal cost. Others are provided free of charge or for a nominal on-line user fee.

##### a. *Air databases.*

**(1) Aerometric Information Retrieval System (AIRS).** The AIRS database contains information about airborne pollutants in the United States, including TSP/PM-10, lead, carbon monoxide, reactive VOC, sulfur dioxide, ozone, and nitrogen oxide. It is comprised of four subsystems: Air Quality (AQS), Facility (AFS), Area/Mobile Source (AMS), and Geo-Common (GCS).

The AQS system contains measurements of ambient air pollution concentrations, associated meteorological data, and areas where air quality improvements are needed. This system is used to assess the overall status of the nation's air quality.

The AFS system contains aerometric emissions and regulatory compliance data on air pollution point sources tracked by EPA and state and local environmental regulatory agencies. This system stores data for 50,000 point source facilities.

The AMS system contains estimates of area-wide emissions from mobile sources, forest fires, fugitives transport, and other large-scale point emissions sources.

The GCS contains all reference information used in the AIRS database.

For access information, contact AIRS database staff, U.S. EPA, Research Triangle Park, NC, 27711; 919-541-5432.

**(2) BACT/LAER Determinations (BLIS).** The BLIS database contains information on pollutants emitted, pollutant types and amounts, control technologies control efficiencies, and other information on BACT/LAER.

For access information, contact BLIS staff, U.S. EPA, 919-541-5432.

**(3) Flue Gas Desulfurization Information System (FGDIS).** The FGDIS database contains information on utility fossil fired boilers and their associated flue gas desulfurization (FGD) systems. It includes specifics of the design, performance, waste products or byproducts, removal, and annualized costs of the FGD systems and identifies FGD system vendors and dates of FGD operation.

For access information, contact FGDIS staff, Department of Energy; 202-586-8420.

**(4) National Acid Precipitation Assessment Program (NAPAP).** The NAPAP database contains information on facility data and annual emissions for point and area sources of air pollutants in 48 contiguous states and 10 Canadian provinces. This database analyzes emissions by plant size, stack height, and general source type.

For access information, contact NTIS staff, Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161; 703-487-4650.

**(5) National Air Toxics Information Clearinghouse (NATICH).** The NATICH database contains information on air pollution control agencies, regulatory program description and contacts, permitting data, acceptable ambient concentrations, ambient air monitoring information, source test data, emissions inventory data, and research and methods development information. This database is organized according to agency and pollutant and emission source. It includes citations and abstracts for published EPA and other federal documents, health assessments, source sampling/ambient monitoring methodologies, and technical monitoring documents.

For access information, contact the Clearinghouse Staff, Pollutant Assessment Branch, U.S. EPA, Research Triangle Park, NC 27711; 919-541-0850.

**(6) National Ambient VOC Data Base, 1970-1987.** This database contains data on the concentrations of 320 VOC and more than 175,000 concentration records. It includes ambient measurements, indoor data, and data collected with personal monitors. Each concentration record in the database represents the daily average for a single chemical, where possible.

For access information, contact NTIS staff, Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161; 703-487-4650.

**(7) Storage and Retrieval of Aerometric Data (SAROAD).** The SAROAD database is used to edit, store, summarize, and report ambient air quality data. Reports and summaries are produced for Freedom of Information, Tracking, and In-house requirements

For access information, contact SAROAD staff, U.S. EPA (MD-14), Research Triangle Park, NC, 27711; 919-541-5432.

**(8) EPA's Sampling and Analysis Methods Database.** This database contains 650 method and analyte summaries and includes the method name and EPA number, analyte, CAS registry number, instrumentation, method detection limits, sampling, and sample container requirements.

For access information, contact SAMD staff, U.S. EPA, Research Triangle Park, NC, 27711; 919-541-2559.

**(9) EPA's Problem POHC Database.** The POHC database is used to assist in evaluating the validity of sampling and analysis procedures for principal organic hazardous constituents (POHCs). It provides guidance on established methods of sampling and analysis for selected organics after incineration.

For access information, contact POHC database staff, U.S. EPA, Research Triangle Park, NC 27711; 919-541-2559.

**(10) Environmental Monitoring Methods Index (EMMI).** The EMMI database includes information on more than 2,600 analytes from over 80 regulatory and nonregulatory lists and more than 900 analytical methods. This database serves as the single authoritative source for cataloguing EPA's analytical methods and aids in the selection of appropriate analytical methods for environmental monitoring studies.

For access information, contact EMMI staff, U.S. EPA, NTIS, Washington, D.C. 22161; 703-321-3547.

**(11) Air methods database.** The Airs Methods Database allows users to access summarized standard methods for chemical analysis to assist in making field decisions on method applicability, operating range of

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the method, interferences of the method, and the types of media and sampler used to collect the sample for that methods.

For access information, contact OERR staff, U.S. EPA, Edison, NJ; 908-321-6738.

### ***b. Superfund/CERCLA databases.***

**(1) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).** The CERCLIS database contains data on potential hazardous waste sites that have been reported to EPA, pursuant to Section 103 of CERCLA, as amended. It contains names and alias names, location, and National Priority List (NPL) and Federal Facility status.

For access information, contact NTIS staff, Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161; 703-487-4650.

**(2) Public Health Risk Evaluation Database (PHRED).** The PHRED database provides chemical, physical, and toxicological data and health standards and criteria for chemicals at Superfund sites.

For access information, contact PHRED staff, U.S. EPA, Office of Emergency and Remedial Response, 401 M Street SW, Washington, DC 20460; 202-383-2182.

**(3) Superfund Enforcement Tracking System (SETS).** The SETS database tracks potentially responsible parties (PRPs) at Superfund sites and used to plan enforcement strategies, respond to public inquiries, and determine potential conflicts of interests.

For access information, contact SETS staff, U.S. EPA, 401 M Street SW, Washington, DC 20460; 202-475-8717.

**(4) Contract Laboratory Program Analytical Results Database (CARD).** The CARD database tracks and monitors Contract Laboratory Program (CLP) analyses, including identification and concentration values for each hazardous substance found in each sample taken at Superfund sites, along with pertinent physical descriptions such as sample matrix and weight or volume. It also includes the results of analyses of laboratory procedures that ensure instrument, laboratory, and method performance.

For access information, contact the CARD User Support Hotline at 703-684-9025.

### ***c. Toxicity databases.***

**(1) Aquatic Toxicity Information Retrieval Database (AQUIRE).** The AQUIRE database contains information on the toxicity of chemicals to fresh and saltwater organisms (except bacteria and amphibians), including acute, chronic, and bio-accumulation effects. It includes reviews on published papers and final reports and information on test conditions and results.

For access information, contact AQUIRE staff, NTIS, Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161; 703-487-4650.

**(2) Chemical Evaluation Search and Retrieval System (CESARS).** The CESARS database contains specific, evaluated chemical profiles for more than 190 compounds, including toxicity data, physical/chemical properties, and environmental fate.

For access information, contact Chemical Information Systems (CIS) Inc. staff, 7215 York Rod., Baltimore, MD 21212; 301-321-8440.

**(3) Integrated Risk Information System (IRIS).** The IRIS database contains health risk and EPA regulatory information on specific chemicals. It also summarizes information on chemical hazard identification and dose-response assessments.

For access information, contact IRIS staff, Dialcom Inc., 600 Maryland Ave. SW, Suite 307, Washington, DC 20024; 202-488-0550.

**(4) Studies on Toxicity Applicable to Risk Assessment (STARA).** The STARA database contains quantitative toxicological data on more than 200 environmental chemicals. It is used to help develop risk assessment methodology.

For access information, contact EPA User Support Line at 919-541-3629.

**(5) Terrestrial Toxicity Database (TERRE\_TOX).** The TERRE\_TOX database contains published information on toxicity of anthropogenic substances to terrestrial animals concerning acute toxicity, behavior, reproduction, physiological, and biochemical responses. It is used to assist in evaluating pre-manufacturing notices and research.

For access information, contact TERRE\_TOX staff, NTIS, Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161; 703-487-4650.

**(6) Toxic Release Inventory (TRI).** This database contains information from facilities on the amounts of over 300 listed toxic chemicals that the facilities release directly to air, water, land that are transported off-site. TRI was mandated by the Emergency Planning and Community Right-To-Know Act. Its purpose is to encourage planning for response to chemical accidents and to provide the public and government information about possible chemical hazards in communities.

For access information, contact the Title III User Support Service, 401 M Street, SW, Washington, DC 20022; 202-260-1501.

Finally, extensive, detailed descriptions for many of the above databases may be found in the February 1, 1992, issue of *Pollution Engineering* and in *Access EPA* (EPA-220/B-92-014).

## D-5. Electronic Bulletin Boards

Electronic bulletin boards are accessed by means of a computer and modem and contain files, databases, and/or conversations between users interested in a single topic. Bulletin boards can be accessed from a personal computer via a modem. The EPA OAQPS Technology Transfer Network (TTN) consists of a number of individual bulletin boards that are related to air monitoring. The TTN bulletin boards are available 24 hours per day, 7 days per week, except for Monday morning 8:00 a.m. to 12:00 noon Eastern Time (unless otherwise note), when the system is down for maintenance and system backup. These and others are identified and described in Table D-2. An on-line user support center is available (919-541-5384) for help information and tips on searching the TTN bulletin board system, which includes "how-to" tutorials, BBS problems and how to solve them, and tips and tricks.

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Description of Electronic**

<b>Bulletin Board</b>	<b>Information Available</b>	<b>Modem Number for Connecting</b>	<b>Phone Number for Assistance</b>
Air RISC (Air Risk Information Support Center)	Provides information and technical guidance relative to health, exposure, and risk assessment of air toxics		919-541-5384
AIRS (Aerometric Information Retrieval System)	Maintains the current AIRSLETTER, relevant brochures, pamphlets, and bulletins; and information on meetings conferences, seminars, and permits.	919-541-5742	919-541-5384
AMTIC (Ambient Monitoring Technology Information Center)	Provides information on ambient air monitoring methods; also provides updates and corrections to current standard monitoring methods	919-541-5742	919-541-5384
APTI (Air Pollution Training Institute)	Offers the widest scope of air pollution training in the U.S.; provides information on curriculum, schedules, locations, and costs	919-541-5742	919-541-5384
BLIS (RACT/BACT/LAER Information System)	Assists State/local personnel and private companies in determining what types of control other air pollution agencies have applied to various sources.	919-541-5742	919-541-5384
CEAM (Center for Exposure Assessment Monitoring)	Provides exposure assessment software programs and databases		919-541-5384
CAA (Clean Air Act Amendments)	Provides summaries and the full text for each title of the 1990 CAA	919-541-5742	919-541-5384
CHIEF (Clearinghouse for Inventories and Emission Factors)	Provides information on air emission inventories, emission factors, inventory guidance, and agency announcements	919-541-5742	919-541-5384
CLU-IN (Cleanup Information)	Provides information bulletins, databases, and a bibliography for corrective action technology	301-589-8366	301-589-8368
CTC (Control Technology Center)	Provides information on projects supported by the CTC related to control technologies; also includes summaries of CTC documents and several emission models	919-541-5742	919-541-5384
EMTIC (Emission Measurement Technology Information Center)	Provides technical information and guidance related to source testing methods	919-541-5742	919-541-5384
NATICH (National Air Toxics Information Clearinghouse)	Provides air pollution control agency data (i.e., program descriptions, permit data, monitoring data, etc.), citations, and abstracts	Call your regional air toxics contact, ADP coordinator, or the Clearinghouse	919-541-0850
NSR (New Source Review)	Provides material and information pertaining to NSR permitting; user can search by selected key words	919-541-5742	919-541-5384
OAQPS (Office of Air Quality Planning and Standards)	Provides basic information about the organization and function of each unit in EPA's OAQPS; information on the status of air pollution control activities are available.	919-541-5742	919-541-5384

**Table D-2 (Continued)**

<b>Bulletin Board</b>	<b>Information Available</b>	<b>Modem Number for Connecting</b>	<b>Phone Number for Assistance</b>
OMS (Office of Mobile Sources)	Provides information pertaining to mobile source emissions, including regulations, test results, models, guidance, etc.	919-541-5742	919-541-5384
ORIA (Office of Radiation and Indoor Air)	Contains information regarding Radionuclide NESHAPs, WIPP, indoor air, and computer models such as COMPLY and CAP88-PC.	919-541-5742	919-541-5384
RODS (Superfund Records of Decision)	Describes the planned course of action to clean up a site and community participation		202-252-0056
SCRAM (Support Center for Regulatory Air Models)	Provides access to regulatory air dispersion models; contains updates and corrections to current regulatory models, including meteorological data and mixing height data	919-541-5742	919-541-5384